

REMARKS

Claims 1, 3-7, 10-13, 18, 20, 21, 23, 24, and 26-35 are pending in the application. Claims 1, 3-7, 10 11, 13, 18, 20, 21, 23, 24, 26-28, and 30-35 are allowed, and claims 12 and 29 are rejected.

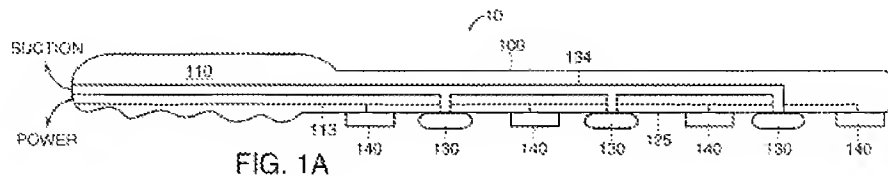
The rejection of claims 12 and 29 under 35 U.S.C. 103(a), as being unpatentable over Klumb et al. (U.S. 5,935,124) and King (U.S. 4,282,886), is maintained. The basis for the rejection, as before, is that Klumb discloses a medical lead 14 extending through the central lumen of catheter body 12 and having a tip electrode 36 that includes an infusion tube 88 used to infuse fluids in proximity of the distal end of the tip electrode. Klumb et al. is admitted to not disclose a tissue adhesive. However, King is relied upon in regard to its disclosure of an epicardial lead having a circular adhesive patch 16 to affix an electrode support member 12 for a “ring” electrode to tissue. The contention is that it would have been obvious to one of ordinary skill in the art to modify the system of Klumb et al. in accordance with the teachings of King so as to infuse tissue adhesive to affix a tip electrode in position at a treatment site.

Applicants pointed out that the Klumb et al. reference relates to an ablation catheter having a tip electrode for ablating the heart tissue. Accordingly, there would be no desire to affix the tip of the ablation catheter to, for example, heart tissue as done by the circular adhesive patch in King. Applicants' position was that, absent a motivation to combine references, a combination of references cannot be used to render claimed subject matter obvious, because doing so is merely a hindsight reconstruction of the structural limitation assembled in a piecemeal fashion. And, given that the tip electrode of an ablation catheter is not to be affixed to heart tissue, there would be no motivation to provide the ablation device of Klumb with tip electrode fixation.

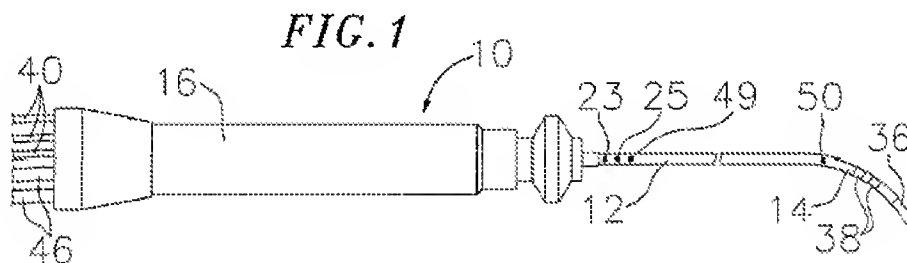
In reply, the Examiner only advances the broad proposition that tissue adhesives can indeed be used on ablation catheters. In support, Wang (US 6,475,179) is identified and relied upon as providing a motivation to combine

King with Klumb. Specifically, Fig. 1 of Wang and col. 3, lines 52-55, are cited. The Examiner's reliance on Wang is, however, misplaced.

First, Wang is not an ablation device with a tip electrode at the distal end like the Klumb device. See Fig. 1A as follows:



Klumb has a distal end tip electrode 36 and an array of ring electrodes 38 proximal to the tip electrode (See Fig. 1).



But, Wang has no tip electrode and only has an array of ablation elements 140 (See Fig. 1A above) that extend along an elongated tissue contact surface 125. Interspersed between ablation elements 140 are surface gripping elements 130, which are preferably suction elements but can feature an adhesive. Thus, Wang is instructive as to the use of adhesives in an ablation catheter only to the extent of teaching that spot adhesives can be used along an elongated contact surface having a line-up of ablation elements. The mere reference in Wang to use of an adhesive fails to rebut the Applicants' position that there is no motivation to provide Klumb with a fixation element including an adhesive within its distal tip electrode to secure the tip electrode at a treatment site. The reliance on Wang falls short of providing the necessary teachings to support a motivation to provide Klumb's ablation device with a tip electrode fixation element regardless of whether it is an adhesive or other structure.

Second, claims 12 and 29 are specific that a fixation element including a glue segment is disposed within a tip electrode to affix the electrode to a treatment site. Wang does not suggest use of a glue segment within an electrode structure at all. Wang merely suggests use of an adhesive segment between electrode structures. Wang thus clearly does not suggest, and in fact teaches away from, provision of a tip electrode fixation element including an adhesive segment within an electrode structure to affix the electrode to tissue at a treatment site.

The contention advanced by the Examiner based on Wang is that use of adhesives is known in ablation catheters. This broad contention fails to rebut the Applicants' position that a person of ordinary skill in the art would not be motivated to provide the ablation tip electrode of Klumb with a fixation element that includes an adhesive. A suggestion to merely use an adhesive as shown in Wang does not meet Applicants' specific argument that one skilled in the art would not provide the tip electrode of an ablation device with an adhesive fixation element. There remains absent any showing of a motivation to form from Klumb and King the claimed subject matter of a fixation element including a tissue adhesive within a tip electrode of a medical lead and adapted to affix the tip electrode to the tissue at a tissue site.

Moreover, Applicants further point out that whether considering King alone or along with Wang, the whole of the teachings in the art is to use an adhesive to anchor a support structure surface that is associated with a surface electrode element. Neither King nor Wang is instructive at all in regard to anchoring or affixing a distal tip electrode to a treatment site. Thus, in combining King with Klumb, at most what results is a structural arrangement as shown in Wang wherein an adhesive patch element is located adjacent to the proximal ring electrodes 38 that are located along the surface of the ablation catheter proximal to the distal end. Furthermore, an absolute necessity would be maintaining the infusion passage open to permit introduction of cooling fluid and electrolyte solutions that facilitate the ablation of tissue at the site of the tip electrode.

In view of the above, it is respectfully submitted that claims 12 and 29 are not obvious over Klumb et al. in view of King, even considering the teachings of Wang, and are allowable.

There being no further outstanding objections or rejections, it is submitted that all claims are in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining, the Examiner is requested to telephone the undersigned attorney to attend to those matters.

Respectfully submitted,

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Date

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